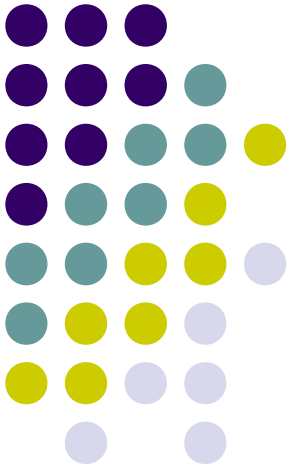
8-Hour Ozone NAAQS

Air Managers Round Table

By Karen Borel, EPA

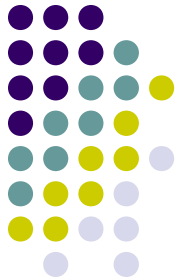
March 3, 2004



Federal Air Quality Standards - Ozone

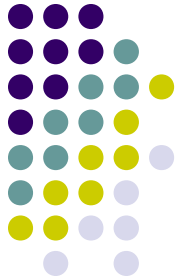
- 1990 Clean Air Act Amendments/1-Hour Ozone Standard
  - 100 areas designated nonattainment
  - 44 areas redesignated to attainment, currently maintenance areas
  - Some maintenance and attainment areas are now violating
- 1997 Revision to NAAQS - 8-Hour Ozone Standard
  - Revised to better → protect human health
  - 1 hour → 8 hour
  - 0.12 ppm → 0.08 ppm
  - Exceedance based → 3 year average

8-Hour Ozone NAAQS – Designations



- July 15, 2003 – States submitted recommendations to EPA
- December 3, 2003 – EPA notified states of modifications
- 120 Days – Consultation between EPA and States
- 2003 Air Quality Data – States updated recommendations in February 2004
- April 15, 2004 - EPA will promulgate final air quality designation decisions

8-Hour Ozone NAAQS – Implementation Guidance



- June 2, 2003 - Implementation Guidance proposed
  - Took comments on several options
  - Final notice expected NLT April 2004

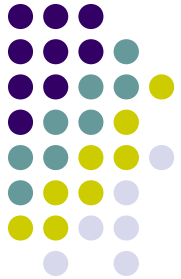
Classification & Attainment Dates Option 1

- Use 8-hour O_3 design value
- All areas classified under Subpart 2
- Meet Subpart 2 requirements

Classification & Attainment Dates - Option 1

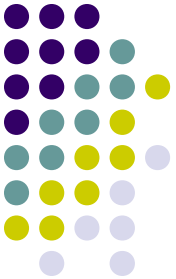
- Classification DV ppm Attain-Yrs
  - Marginal 0.085 – 0.092 3
  - Moderate 0.092 – 0.107 6
  - Serious 0.107 – 0.120 9
  - Severe-15 1.120 – 0.127 15
  - Severe-17 0.127 – 0.187 17
  - Extreme 0.187 - 20

Option 2 –
(EPA's preferred approach)



- Classifies some areas under Subpart 1, and some areas under Subpart 2
- 2-Step Approach

Option 2

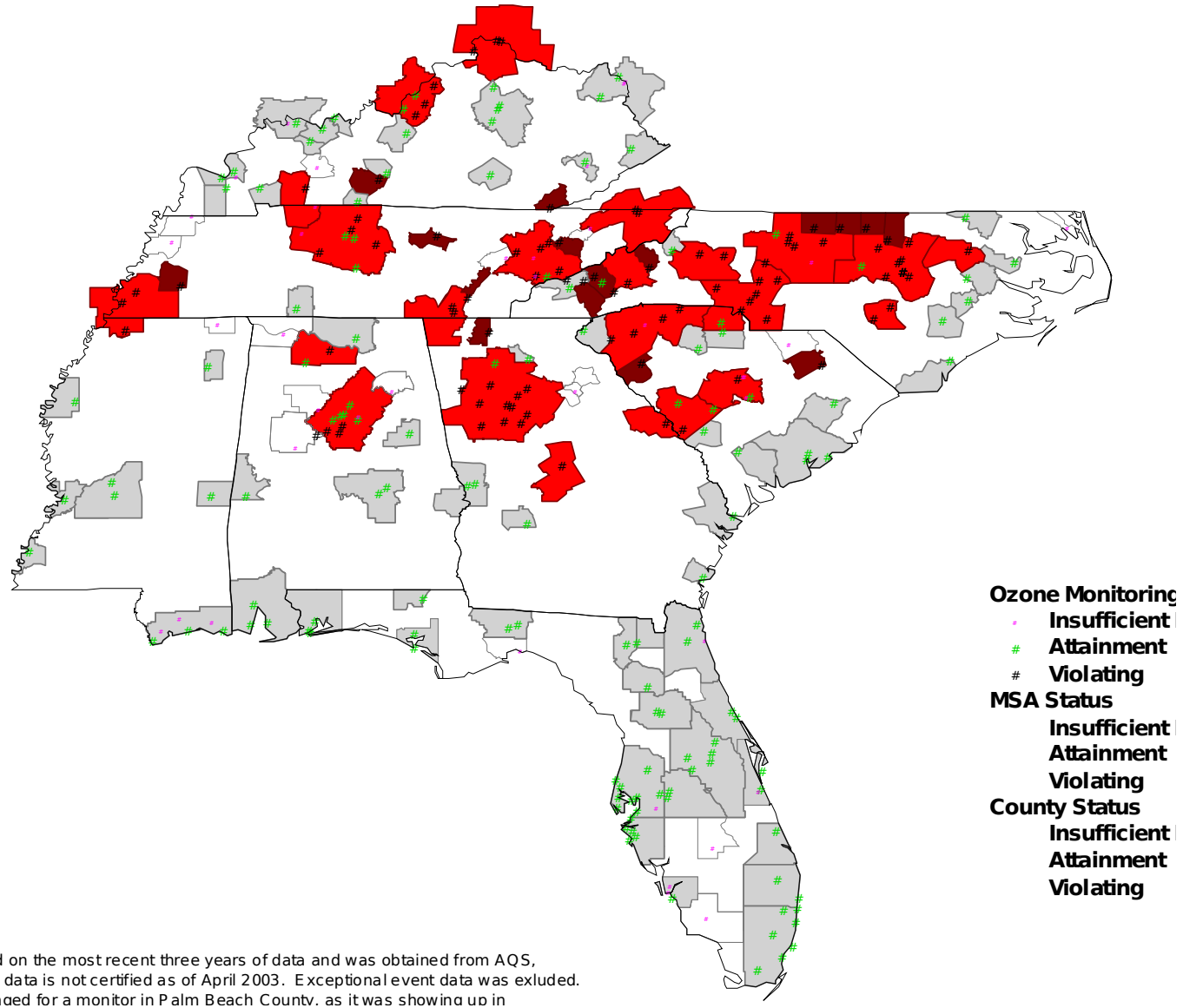


- Step 1 – Establish 2 Groups, based on 1-Hr Ozone Design Value
  - Group 1 . . . . . < 0.121 ppm
  - Group 2 . . . . . ≥ 0.121 ppm
- Step 2 - Establish Requirements for both Groups

TABLE 2 TABLE 1 OF SUBPART 2 1-HOUR OZONE CLASSIFICATION TABLE TRANSLATION TO 8-HOUR DESIGN VALUES					
Area class		CAA design value thresholds 1-hour ozone ppm	% above 1-hour ozone NAAQS	Translated 8-hour design value thresholds ppm ozone	Primary standard attainment date–years after enactment (1-hour std)**
Marginal	from	0.121	0.833	0.085*	3 years
	up to	0.138	15.000	0.092	
Moderate	from	0.138	15.000	0.092	6 years
	up to	0.160	33.333	0.107	
Serious	from	0.160	33.333	0.107	9 years
	up to	0.180	50.000	0.120	
Severe-15	from	0.180	50.000	0.120	15 years
	up to	0.190	58.333	0.127	
Severe-17	from	0.190	58.333	0.127	17 years
	up to	0.280	133.333	0.187	
Extreme	equal to or above	0.280	133.333	0.187	20 years

* The table's lowest value reflects the lowest nonattaining value, viz., 0.085 ppm.

****For 8-hr ozone standard, EPA proposing to interpret the maximum period for attainment starting from date of designation.**



based on the most recent three years of data and was obtained from AQS,
e 2002 data is not certified as of April 2003. Exceptional event data was exluded.
s changed for a monitor in Palm Beach County, as it was showing up in

What has EPA done to help bring areas into attainment?
Large Stationary Sources

- NOx SIP Call
  - Reduces regional Levels of NOx in East
  - Reduces precursor emissions for O_3/$PM_{2.5}$

What has EPA done to help bring areas into attainment?
Cars/Gasoline

- Tier 2/Low Sulfur Gasoline
  - Reduces tail pipe precursor emissions
  - Reduces sulfur in gasoline
    - Cleaner catalyst = less NOx – less nitrates
    - Less sulfur – less sulfate
- On-road Heavy Duty Diesel Rule
- Non-road Heavy Duty Diesel Rule
- Clear Skies

What has EPA done to help bring areas into attainment? *Trucks/Off-road Vehicles*

- On-road Heavy Duty Diesel Rule
  - Tighter diesel engine standards
  - Cleaner diesel fuel
- Diesel retrofits
- Non-road Heavy Duty Diesel Rule
  - Reduce emissions from construction/farm equipment
- Clear Skies

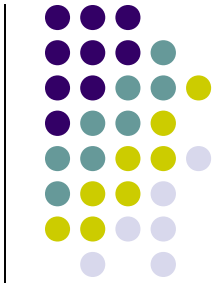
What has EPA done to help bring areas into attainment?
Utilities/Large Sources

- Clear Skies/Interstate Air Quality Rule
  - Additional NOx reductions over broader area
  - SO_2 reductions from power plants
  - Assist areas in attaining air quality standards

Early Action Compacts

- What are they?
- Where are they?
- What do they accomplish?

Early Action Compacts
What are they?



- Action at local area to reduce emissions, voluntarily
- Stakeholder process

Early Action Compacts

- Calls for “early” SIPs and associated controls coupled with a deferral of the effective date of future EPA ozone nonattainment (NA) designations.
- On December 31, 2002, areas interested in an Early Action Compact submitted Compacts
- Potential control measures and progress reports received in June 2003 and December 2003
- Next milestone – March 31, 2004 – local measures

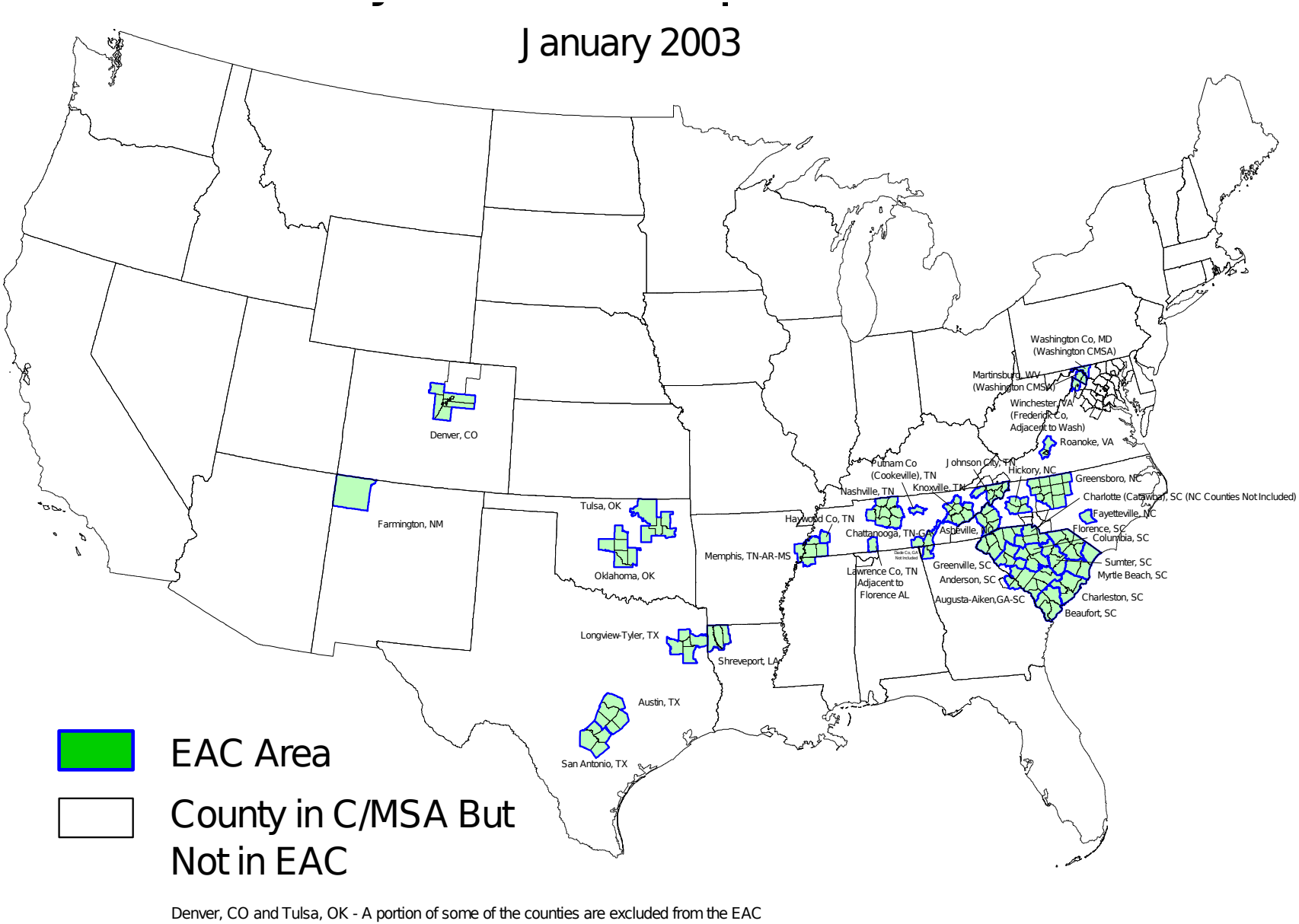
Early Action Compacts
Where are they?

- 21 of 33 areas are in the Southeast
  - Georgia, Mississippi, North Carolina, South Carolina and Tennessee
- Remaining areas
  - Arkansas, Colorado, Louisiana, Maryland, New Mexico, Oklahoma, Texas, Virginia, and West Virginia

EACs in Region 4

- North Carolina
  - 4 Areas – includes 20 Counties and 19 Cities
  - Mountain area (Western NC, including Asheville; Unifour (Hickory area); Triad (Greensboro area); and Fayetteville
- South Carolina
  - 10 Areas – includes 45 of 46 counties in SC, and 2 Counties in GA
  - Greenville; Charlotte, Florence, Charleston, Augusta-Aiken, Columbia and others
- Tennessee
  - 8 areas – includes 30 Counties and 7 Cities
  - Chattanooga, Knoxville, Johnson City/Kingsport, Memphis, Nashville and others

EAC Areas … Ozone

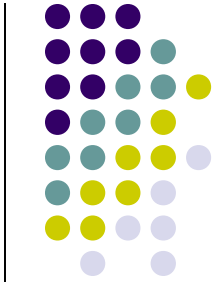


Denver, CO and Tulsa, OK - A portion of some of the counties are excluded from the EAC

Early Action Compacts
What do they accomplish?

- Clean Air Sooner
- Deferral of *effective* date of designations
- Maintains Air Quality

Who Should I Contact?



- Karen Borel, EPA Region 4
  - borel.karen@epa.gov, 404/562-9029
- Dick Schutt, EPA Region 4
  - schutt.dick@epa.gov, 404/562-9029